

# TUBERCULOSIS IN ARIZONA

## A Summary of Cases Reported through December 31, 1996

Report Generated on April 10, 1998

Tuberculosis Elimination Section  
Office of Infectious Disease Services/Bureau of Epidemiology and Disease Control  
Arizona Department of Health Services

### Data in this Report are Provisional

### Morbidity

Table 1: Tuberculosis Cases and Case Rates per 100,000 Population: Arizona and United States, 1990-1996

Year Reported*	Arizona			United States	
	Cases	Population	Rate per 100,000	Cases****	Rate per 100,000****
1990	275	3,665,228**	7.5**	25,701	10.3
1991	324	3,763,372***	8.6***	26,283	10.4
1992	258	3,858,825***	6.7***	26,673	10.5
1993	228	3,946,975***	5.8***	25,287	9.8
1994	247	4,036,875***	6.1***	24,361	9.4
1995	317	4,184,723***	7.6***	22,860	8.7
1996	282	4,462,717***	6.3***	21,337	8.0
Total	1,931	NA	NA	172,502	NA

\* Year reported reflects the year a case was counted by ADHS

\*\* Based on the 1990 Census

\*\*\* Based on population projections for the corresponding years

\*\*\*\* Data from the U.S. Department of Health and Human Services

### Demographics

Table 2: Tuberculosis Cases and Case Rates per 100,000 Population by Age Group: Arizona, 1996

Age Group	Cases # ( % )	Population*	Rate per 100,000*
Under 5	9 ( 3.2 )	341,149	2.6
5 - 14	12 ( 4.3 )	672,732	1.8
15 - 24	12 ( 4.3 )	614,141	2.0
25 - 44	85 ( 30.1 )	1,369,165	6.2
45 - 64	80 ( 28.4 )	848,188	9.4
Over 64	84 ( 29.8 )	617,342	13.6
Total	282 ( 100 )	4,462,717	6.3

\* Based on 1996 population projections

Table 3: Tuberculosis Cases by Age Group and Sex: Arizona, 1996

Age Group	Male # (%) * (%) **	Female # (%) * (%) **	Total Cases # (%) * (%) **
Under 5	1 ( 11.1 ) ( 0.5 )	8 ( 88.9 ) ( 8.0 )	9 ( 100 ) ( 3.2 )
5 - 14	5 ( 41.7 ) ( 2.7 )	7 ( 58.3 ) ( 7.0 )	12 ( 100 ) ( 4.3 )
15 - 24	6 ( 50.0 ) ( 3.3 )	6 ( 50.0 ) ( 6.0 )	12 ( 100 ) ( 4.3 )
25 - 44	61 ( 71.8 ) ( 33.5 )	24 ( 28.2 ) ( 24.0 )	85 ( 100 ) ( 30.1 )
45 - 64	57 ( 71.3 ) ( 31.3 )	23 ( 28.8 ) ( 23.0 )	80 ( 100 ) ( 28.4 )
Over 64	52 ( 61.9 ) ( 28.6 )	32 ( 38.1 ) ( 32.0 )	84 ( 100 ) ( 29.8 )
Total	182 ( 64.5 ) ( 100 )	100 ( 35.5 ) ( 100 )	282 ( 100 ) ( 100 )

\* Percentage of row total

\*\* Percentage of column total

Table 4: Tuberculosis Cases by Age Group and Race/Ethnicity: Arizona, 1996

Age Group	White, Not Hispanic # (%)* (%)**	African-American, Not Hispanic # (%)* (%)**	Hispanic, All Races # (%)* (%)**	Native American, Not Hispanic # (%)* (%)**	Asian/Pacific Islander, Not Hispanic # (%)* (%)**	Unknown # (%)* (%)**	Total Cases # (%)* (%)**
Under 5	1 (11.1) ( 1.2)	0	8 (88.9) ( 5.8)	0	0	0	9 (100) ( 3.2)
5 - 14	3 (25.0) ( 3.7)	1 ( 8.3) (10.0)	7 (58.3) ( 5.1)	1 ( 8.3) ( 3.1)	0	0	12 (100) ( 4.3)
15 - 24	0	0	9 (75.0) ( 6.6)	0	3 (25.0) (14.3)	0	12 (100) ( 4.3)
25 - 44	24(28.2) (29.3)	5 ( 5.9) (50.0)	41 (48.2) (29.9)	5 ( 5.9) (15.6)	10 (11.8) (47.6)	0	85 (100) (30.1)
45 - 64	21(26.3) (25.6)	3 ( 3.8) (30.0)	37 (46.3) (27.0)	12 (15.0) (37.5)	7 ( 8.8) ( 33.3)	0	80 (100) (28.4)
Over 64	33(39.3) (40.2)	1 ( 1.2) (10.0)	35 (41.7) (25.5)	14 (16.7) (43.8)	1 ( 1.2) ( 4.8)	0	84 (100) (29.8)
Total	82 (29.1) (100)	10 ( 3.5) (100)	137 (48.6) ( 100)	32(11.3) ( 100)	21 (7.4) ( 100)	0	282 (100) (100)
1996 Population* **	3,047,087	154,471	918,360	258,157	84,642	NA	4,462,717
Rate per 100,000 ***	2.7	6.5	14.9	12.4	24.8	NA	6.3

\* Percentage of row total

\*\* Percentage of column total

\*\*\* Race-specific rates based on 1996 population estimates (Table 10B-3: Arizona Department of Economic Security, Population Statistics Unit)

## Selected Clinical Characteristics

Table 5: Tuberculosis Cases by Form of Disease and Vital Status at Diagnosis: Arizona, 1996

Form of Disease	Cases Alive at Diagnosis # (%)* (%)**	Cases Diagnosed after Death***	Total Cases # (%)* (%)**
Pulmonary Only ****	222 (96.1) (82.5)	9 ( 3.9) (69.2)	231 (100) (81.9)
Pulmonary & Extra-pulmonary (includes miliary TB)	14 (87.5) ( 5.2)	2 (12.5) (15.4)	16 (100) ( 5.7)
Extra-pulmonary Only	33 (94.3) (12.3)	2 ( 5.7) (15.4)	35 (100) (12.4)
Total	269 (95.4) (100)	13 ( 4.6) (10.0)	282 (100) (100)

\* Percentage by row

\*\* Percentage by column

\*\*\* It is unknown if TB was the underlying cause of death

\*\*\*\* The classification of Pulmonary TB includes laryngeal TB

Table 6: Tuberculosis Cases Resistant to INH and Other Anti-TB Drugs: Arizona, 1993 - 1996

Year Reported*	Cases	Number of Culture Confirmed Cases with Initial Drug Sensitivity Test Results	INH Resistant** # (%)***	Multiple Drug Resistant**** # (%)***	Other Drug Resistance**** # (%)***	Total Cases with Drug Resistance # (%)***
1993	228	193	11 ( 5.7)	3 ( 1.6)	17 ( 8.8)	31 (16.1)
1994	247	204	15 ( 7.4)	4 ( 2.0)	17 ( 8.3)	36 (17.6)
1995	317	231	8 ( 3.5)	3 ( 1.3)	29 (12.6)	40 (17.3)
1996	282	223	5 ( 2.2)	7 ( 3.1)	24 (10.8)	36 (16.1)
Total	1074	847	39 ( 4.6)	17 ( 2.0)	87 ( 10.3)	143 (16.9)

\* Year reported reflects the year a case was counted by ADHS

\*\* Resistant to at least INH **without** resistance to RIF

\*\*\* Percent of total cases with sensitivity testing

\*\*\*\* Resistant to **at least** INH and RIF\*\*\*\*\* Resistance to drugs **other than** INH

## County of Residence

Table 9: Tuberculosis Cases by County of Residence and Selected Characteristics: Arizona, 1996

County of Residence	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz	Maricopa	Mohave	Navajo	Pima	Pinal	Santa Cruz	Yavapai	Yuma	Total Cases
Cases	6	3	6	3	1	1	1	147	8	7	37	20	2	3	37	282
Rate per 100,000 Population*	9.3	2.6	5.3	6.6	3.2	11.6	5.5	5.6	6.3	8.3	4.7	13.9	5.7	2.2	29.6	6.3
Race/Ethnicity																
White, Not Hispanic	0	0	1	0	0	1	0	53	5	1	15	4	0	0	2	82
African-American, Not Hispanic	0	0	0	0	0	0	0	8	0	0	1	0	0	1	0	10
Hispanic, All Races	0	2	1	1	0	0	0	63	2	0	17	12	2	2	35	137
Native American, Not Hispanic	6	0	4	2	1	0	1	7	1	6	2	2	0	0	0	32
Asian/Pacific Islander, Not Hispanic	0	1	0	0	0	0	0	16	0	0	2	2	0	0	0	21
Sex/Age																
All Sexes, Children <= 14 years	0	0	0	0	0	0	0	15	0	0	0	0	0	0	6	21
Females, >14 years	4	1	1	0	1	0	0	42	2	3	12	7	0	1	11	85
Males, > 14 years	2	2	5	3	0	1	1	90	6	4	25	13	2	2	20	176
Type of Residence																
Correctional Facility	0	1	0	0	0	0	0	5	0	0	1	10	0	0	1	18
Long Term Care Facility	0	0	0	0	0	0	0	9	0	0	3	2	0	1	0	15
Homeless**	0	0	2	1	0	0	0	22	1	0	3	2	1	1	1	34
Country of Birth																
Foreign-born	0	2	0	0	0	0	0	47	2	0	17	10	1	0	28	107
Drug Resistance																
INH Resistance***	0	0	0	0	0	0	0	4	0	0	0	1	0	0	0	5
MDR****	0	0	0	0	0	0	0	3	0	0	1	1	0	0	2	7

\* Based on 1996 population projections  
 \*\* Within the year before TB diagnosis (routine collection of information began Jan. 1, 1993).  
 \*\*\* Resistance to at least INH **without** resistance to RIF  
 \*\*\*\* Resistance to at least INH and RIF

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 Database - H:\tbes\1997.rec  
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 Author- DGM

Note: The data in this report are provisional.  
 Report approved by OIDS Office Chief on

## Risk Factor Information

Table 7: Tuberculosis Cases by Selected Characteristics: Arizona, 1993 - 1996

Risk Factor (RF)	1993 Cases with RF # (% of all 1993 cases)	1994 Cases with RF # (% of all 1994 cases)	1995 Cases with RF # (% of all 1995 cases)	1996 Cases with RF # (% of all 1996 cases)
<b>Occupation</b>				
Correctional Facility Worker	0	0	0	0
Health Care Worker	3 ( 1.3)	6 ( 2.4)	8 ( 2.5)	2 ( 0.7)
Migrant Farm Worker	5 ( 2.2)	7 ( 2.8)	4 ( 1.3)	9 ( 3.2)
<b>Reported Behaviors</b>				
Injectable Drug User*	8 ( 3.5)	4 ( 1.6)	17 ( 5.4)	12 ( 4.3)
Non-injectable Drugs ONLY*	9 ( 3.9)	5 ( 2.0)	14 ( 4.4)	13 ( 4.6)
Excessive Alcohol Use*	22 ( 9.6)	28 (11.3)	43 (13.6)	37 (13.1)
<b>Type of Residence</b>				
Long Term Care Facility	5 ( 2.2)	10 ( 4.0)	16 ( 5.0)	15 ( 5.3)
Correctional Facility	6 ( 2.6)	6 ( 2.4)	16 ( 5.0)	18 ( 6.4)
Homeless*	31 (13.6)	26 (10.5)	45 (14.2)	34 (12.1)
<b>Country of Birth</b>				
Foreign Born	75 (32.9)	88 (35.6)	121 (38.2)	107 (37.9)
<b>Underlying Disease</b>				
Known HIV/AIDS**	16 ( 7.0)	14 ( 5.7)	28 ( 8.8)	16 ( 5.7)

\* Within the year before TB diagnosis (routine collection of information began Jan. 1, 1993)

\*\* Due to the lag in HIV/AIDS reporting, the data on HIV/AIDS and TB co-morbidity may be incomplete

Table 8: Tuberculosis Cases Among Foreign-born Persons by Length of Time in the United States: Arizona, 1996

Area of Origin	Years in the United States Before Tuberculosis Report				
	Less than Two Years # (%)* (%)**	Two to Three Years # (%)* (%)**	Four or More # (%)* (%)**	Unknown # (%)* (%)**	Total Cases # (%)* (%)**
Asia/Pacific Islands	9 (39.1) (27.3)	2 ( 8.7) (11.0)	9 (39.1) (21.4)	3 (13.1) (21.4)	23 (100) (21.5)
Mexico	23 (29.1) (69.7)	14 (17.7) (77.8)	31 (39.2) (73.8)	11 (14.0) (78.6)	79 (100) (73.8)
Other Central and South American Countries	0	1 ( 100) ( 5.6)	0	0	1 (100) ( 1.0)
Other	1 (25.0) ( 3.0)	1 (25.0) ( 5.6)	2 (50.0) ( 4.8)	0	4 (100) ( 3.7)
Total	33 (30.8) (100)	18 (16.8) ( 100)	42 (39.3) (100)	14 (13.1) (100)	107 (100) (100)

\* Percentage of row total

\*\* Percentage of column total